

SCG088-P09

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## Subsurface density structure of the Kuninaka plain in Sado Island based on gravity survey, central Japan

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We conducted gravity survey with LaCoste and Romberg Model-G824 gravity meter in the Kuninaka Plain, Sado Island. Each interval of observation sites is about 100 m. Error of measurement at each site is less than or equal to 0.03 mGal. The elevation of each site is leveled with RTKGPS.

Bouguer anomaly has the biggest southernmost of survey line (about 76 mGal) and suddenly decreases from the 1.5km to the north. It is the minimum at about 3.2km (57mGal).

We employed a 2-D gravity field modeling software 2MODTM (FUGRO-LCT Inc.) to develop the subsurface density model. Taking account of the results due to the reflection survey performed together with this study, we assumed two layers in the model, the densities of which are 2.67 and 2.00g/cm<sup>3</sup> in ascending order. We assumed the upper layer that is sedimentary rocks of middle Miocene and Holocene. Second layer is lower Miocene, Kyozukayama formation, Aikawa formation and basement rocks.

Keywords: Sado island, gravity survey, Kuninakaminami fault, Bouguer anomaly